



Climate change and rising heat: Population health implications for working people in Australia

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Abstract:

The rapid rise in extreme heat events in Australia recently is already taking a health toll. Climate change scenarios predict increases in the frequency and intensity of extreme heat events in the future, and population health may be significantly compromised for people who cannot reduce their heat exposure. Exposure to extreme heat presents a health hazard to all who are physically active, particularly outdoor workers and indoor workers with minimal access to cooling systems while working. At air temperatures close to (or beyond) the core body temperature of 37 degrees C, body cooling via sweating is essential, and this mechanism is hampered by high air humidity. Heat exposure among elite athletes and the military has been investigated, whereas the impacts on workers remain largely unexplored, particularly in relation to future climate change. Workers span all age groups and diverse levels of fitness and health status, including people with higher than "normal" sensitivity to heat. In a hotter world, workers are likely to experience more heat stress and find it increasingly difficult to maintain productivity. Modeling of future climate change in Australia shows a substantial increase in the number of very hot days (>35 degrees C) across the country. In this article, the authors characterize the health risks associated with heat exposure on working people and discuss future exposure risks as temperatures rise. Progress toward developing occupational health and safety guidelines for heat in Australia are summarized.

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Resource Description

Climate Scenario :

specification of climate scenario (set of assumptions about future states related to climate)

Special Report on Emissions Scenarios (SRES), Other Climate Scenario

Special Report on Emissions Scenarios (SRES) Scenario: SRES A1

Other Climate Scenario: SRES A1B, A1F1

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Climate Change and Human Health Literature Portal

Temperature: Extreme Heat

Geographic Feature: 

resource focuses on specific type of geography

Desert

Geographic Location: 

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact: 

specification of health effect or disease related to climate change exposure

Morbidity/Mortality

Mitigation/Adaptation: 

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: 

type of model used or methodology development is a focus of resource

Exposure Change Prediction

Population of Concern: A focus of content

Population of Concern: 

populations at particular risk or vulnerability to climate change impacts

Workers

Resource Type: 

format or standard characteristic of resource

Policy/Opinion, Review

Timescale: 

time period studied

Long-Term (>50 years)

Vulnerability/Impact Assessment: 

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content